

**WHAT IS CLAIMED IS:**

1. An isolated nucleic acid sequence encoding a polypeptide having  $\beta$ -1,3-glucanase activity, wherein the polypeptide is selected from the group consisting of:
  - (a) a polypeptide having an amino acid sequence shown in SEQ ID NO: 1; and
  - (b) a polypeptide which is encoded by a nucleic acid sequence which hybridizes under high stringency conditions with the nucleotide sequence of SEQ ID NO:2.
2. The isolated nucleic acid molecule of Claim 1, which has the sequence of SEQ ID NO: 2.
3. A vector comprising the isolated nucleic acid molecule as claimed in Claim 1.
4. The vector of Claim 3, wherein the isolated nucleic acid has the sequence of SEQ ID NO: 2.
6. A host cell comprising the vector of Claim 3.
7. The host cell of Claim 6, comprising the vector of Claim 4.
8. The host cell of claim 7, wherein the host cell is a bacterial cell or a plant cell.
9. The host cell of claim 8, wherein the bacterial cell is an *Agrobacterium* cell.
10. The host cell of claim 8, wherein the host cell is a plant cell.
11. A transgenic plant, which is transformed with an isolated nucleic

acid molecule of Claim 1.

12. The transgenic plant of Claim 8, which is transformed with an isolated nucleic acid molecule of Claim 2.

5 13. An isolated polypeptide, which is selected from the group consisting of:

(a) a polypeptide having an amino acid sequence shown in SEQ ID NO: 1; and

10 (b) a polypeptide which is encoded by a nucleic acid sequence which hybridizes under high stringency conditions with the nucleotide sequence of SEQ ID NO:2.

14. The isolated polypeptide of Claim 13, which has an amino acid sequence shown in SEQ ID NO: 1.